

# O&O DiskImage 2

Professional Edition

O&O DiskImage 2  
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# About O&O DiskImage

## Welcome to O&O DiskImage!

Thank you for choosing O&O DiskImage! O&O DiskImage gives you a quick and easy method of preventing any kind of data loss. With O&O DiskImage you can create regular image files of your drives, avoiding any future loss of your precious data.

O&O DiskImage enables the convenient duplication or archiving of entire operating systems and individual partitions. It even supports dynamic drives and RAID systems.

You can customize the imaging methods to suit your own individual needs. The so-called forensic imaging method lets you make a 1 to 1 image of your system. You can also analyze even unassigned sectors for deleted data at a later time. The remaining methods enable the imaging of only used sectors and exclude unimportant files from the image. Another highlight of O&O DiskImage is the incremental imaging method. This creates an image only of implemented changes to the base image. Incremental images can also be merged at a later date to form a new and current image. Because this saves a substantial amount of computer performance, you are left free to continue working on your PC parallel to the imaging!

With O&O DiskImage you can save an entire functional operating system environment, and use it on several computers. Administrators of larger networks will especially appreciate the value of this function. Software developers also use this tool regularly to test new programs on defined, standardized operating system environments.

With the new O&O DiskImage Server Edition it is now also possible to image a server locally.

The following chapters will explain how you can get the optimum usage from O&O DiskImage and how to get started.

We hope you enjoy our product and that it saves you valuable time, both at work and at home!

Your O&O Software GmbH  
[www.oo-software.com](http://www.oo-software.com)

## Important features at a glance

- Native support of Windows x64 versions
- Utilizes the speed advantages of multi-core and multiprocessors
- High compression levels with minimum CPU demand
- Burn images to CD/DVD
- Supports all common removable data storage media
- Checks image files and drives for damage
- Native support of dynamic drives
- Secure encryption of your data (AES with up to 256-Bit)
- Images can be used as virtual drives
- Checksum function for checking and distinguishing sums of images and originals
- Windows PE Version: Also starts without an operating system
- Make direct copies of drives

# Installation and System Requirements

## System Requirements

### Operating System:

- Windows Vista (all editions)
- Windows XP (all editions)
- Windows 2000 Professional

### Extra for O&O DiskImage Server Edition:

- Windows 2000 Server (all editions)
- Windows Server 2003 (all editions)

### Hardware:

- 512 MB RAM, for Server Edition 1024 MB RAM recommended
- 30 MB free hard disk space
- CD-ROM Drive
- VGA Graphic Card with minimum 800x600 resolution and 256 colors
- Keyboard and mouse

### Administrative Privileges:

In order to install and register O&O DiskImage you must be a member of a local administrator group or possess an equivalent level of privileges. If you are a domain administrator, then you must possess the adequate level of administrative privileges.

## Installation

Installing O&O DiskImage is very straight forward. Simply follow the instructions set out below:

1. Start the computer on which you would like to install O&O DiskImage
2. Log-in as a local administrator or user with equivalent privileges
3. Start the installation file (SETUP.EXE) from O&O DiskImage, which you have either downloaded from our server or have on your personal CD ROM
4. After the set-up program has been successfully initialized, please follow the on-screen instructions to complete the installation
5. You will be given the option of making O&O DiskImage available to just you or to all users

## Registration

In order to register O&O DiskImage, you will require the registration code you received when purchasing the product. This registration code will also be referred to as a license key, serial number or product ID.

If you would like to register, start O&O DiskImage. The registration assistant always appears automatically at the start to guide you if you are using an unregistered version or have entered the registration code incorrectly.

## Entering the License Number



### Note:

In order to activate the product after installation or at a later time, you must possess a valid license key. If you do not enter a valid license key, you can still use O&O DiskImage as a fully functional trial version for up to a maximum of 30 days. Should you have any questions, please contact our support team.

The registration assistant allows for a simple registration process. When you select the option **Enter Registration Code**, a dialog box will appear where you can enter the registration code you received when purchasing the software. Please make sure that you do not confuse the letter “O” with zeros or enter in any empty spaces.

Press **Next** to save the registration data or **Cancel** to leave the dialog window without saving the data.

Should you run into any problems when entering your registration code, please contact our support team.

### Note about Licensing

You can test O&O DiskImage for 30 days free of charge and with no obligation. The remaining trial period will be displayed each time you start the program.

O&O DiskImage is licensed per computer. This means that for every computer on which you run O&O DiskImage, it is necessary that you purchase a license. This license may not be transferred onto another computer.

If you would like to implement O&O DiskImage in your company or as a technician for your customers, then please contact our resellers or distributors, who can offer you the right license to fit your needs!



### Important:

It is not possible to restore a system partition with the trial version. To do so you need the full version with the bootable O&O DiskImage CD.

### Completing Registration

When you have correctly entered the license code you will receive confirmation in the dialog window. You can now register online and benefit from many advantages, such as technical support and free upgrades. To do so, simply click on **Register Product Online!** To close the assistant simply click on **Close**.



## Updates for O&O DiskImage

With an update from the previous version to O&O DiskImage 2, please take note of the following:

- First uninstall the previous version of O&O DiskImage
- Start the O&O DiskImage installation
- Complete the O&O DiskImage installation in the normal way
- Once finished, the new version is fully installed

## Uninstallation

To remove O&O DiskImage from your PC, please follow the instructions below:

Open the Control Panel in the Windows start menu and select **"Add or Remove Programs"**.

Please select **O&O DiskImage** from the list of installed software programs and then click on the **Add/Remove** button.

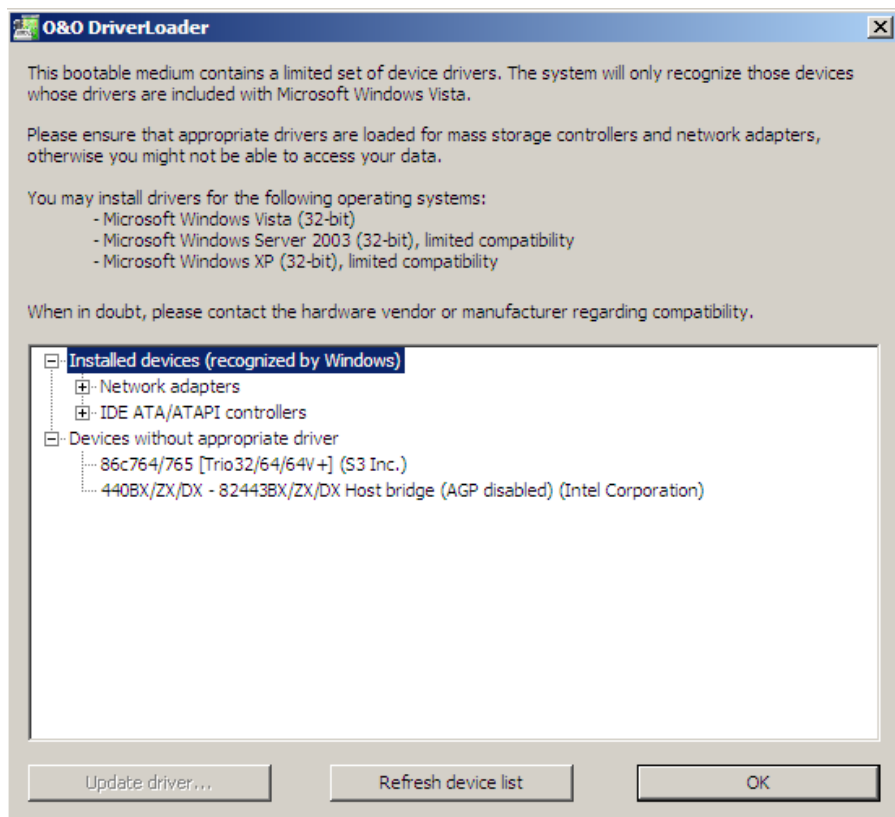
Confirm the uninstallation of O&O DiskImage. Once uninstallation is complete you will receive a confirmation message, and you may be prompted to restart your computer.

## Using the Windows PE Version

No installation is necessary for the Windows PE Version of O&O DiskImage. It starts directly from CD. You will need this CD when, for example, you wish to restore your system partition.

### Starting O&O DiskImage under Win PE:

1. Please ensure that your system can be started from the CD. The appropriate settings can be created in BIOS. You can obtain further information on this from your Mother board manufacturer
2. Put the O&O DiskImage CD in your computer's CD/DVD drive
3. Restart the computer
4. Follow the instructions at the start of the CD/DVD. A window containing the system settings will then appear
5. Select a language and region
6. At the next stage you can load drivers for those devices where no drivers under Windows PE were initially found
7. After license confirmation, O&O DiskImage will start up

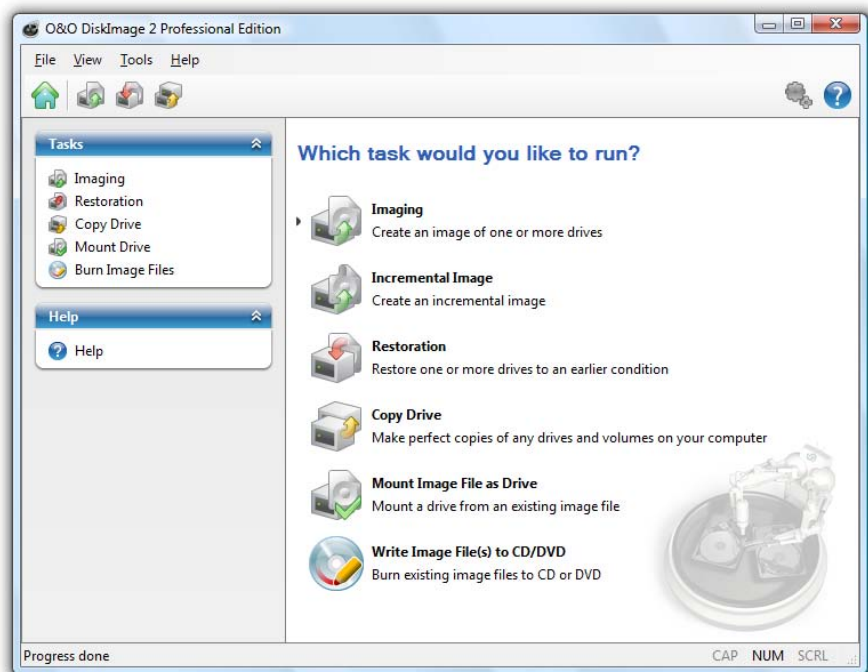


Load Drivers under Windows PE

# Getting Started

## Introduction

In this section we will explain to you how, after successfully installing O&O DiskImage, you can take images of drives and transfer them again to your computer. **Start O&O DiskImage under Start/Programs/O&O Software/O&O DiskImage.** You can receive online help by simply clicking on **Help**.



O&O DiskImage Start

## General Terms and Definitions

### Image

An Image is a “Copy” of your drive or partition. This “Copy” contains all information from the original. A special feature of an image is that the file format is specially compressed and takes up much less disk space than the original. The more you make images of your drive, the less you need worry about data loss. Should data on the original drive be lost or damaged, with just a few mouse clicks you can restore your last image with all data onto your computer, thus recovering the original state of your drive before the last imaging.

### Image File

An image can be made up of many image files (\*.img). For instance, if the storage medium you wish to put the image on is not large enough, you can split the image onto different storage media. You can also manually set the number of MB per Storage medium. When you wish to split an image onto several storage media, a new image file is created on each medium that forms part of one Image. It is vital that the media (CD/DVD) are numbered in case you wish to use the image to recover a drive or as a base image for an incremental imaging.

### Incremental Image

An incremental image can be created using the Incremental Imaging Method (see also Image Options/Image Methods). Only changes to the base image are saved. A Base image has to have been made previously from the drive you wish to now image incrementally (see Base Image). This method saves you time and computer performance as the image only contains recent changes. Should you have built up a number of incremental images, you can combine them to form a Base image.

### Base Image

A base image is an image of your drive that you can create using all imaging methods. It serves as the basis for creating an incremental image. An incremental image can also be used as a base image. When creating or restoring an incremental image, you will need the “complete” base image as well as the subsequent incremental images. There is an exception to this rule: should the option **Data Comparison with Checksums** under **Image Options/Advanced** be selected, then you only require the last incremental image to create a new one. This option is set by default.

# Create an Image

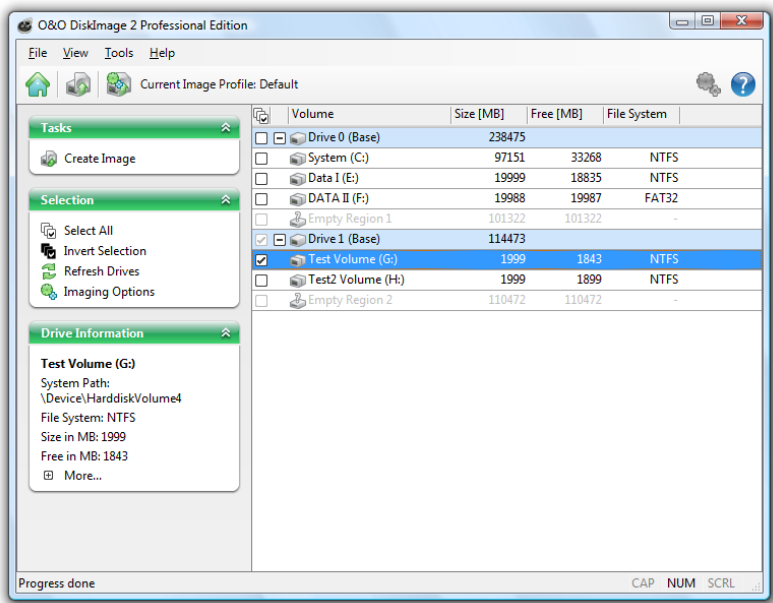
To create an Image of one or more drives, please follow the instructions below:



**Note:**

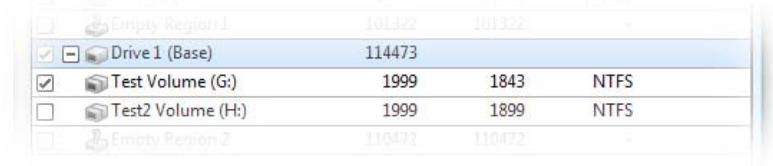
If you wish to save an image to an external hard disk, connect this to your computer before starting O&O DiskImage. It will then be displayed as a drive.

- 1. In the start screen or file menu, click on Image



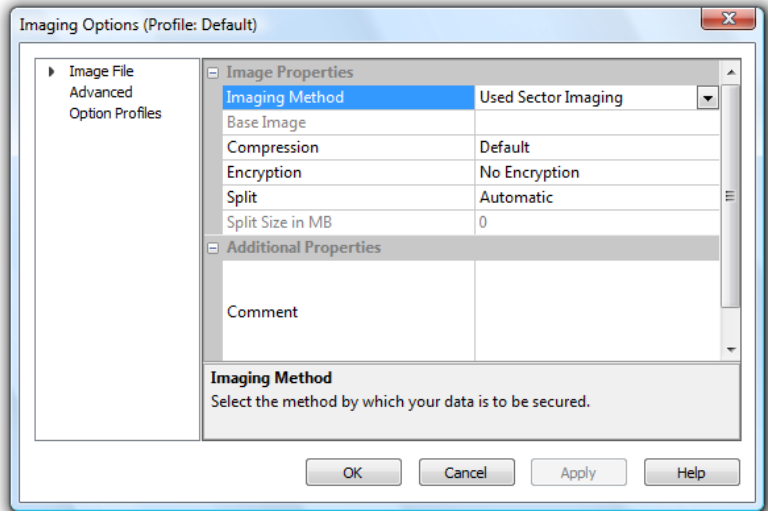
Program window for creating an Image

- 2. Select the drive for imaging by ticking the box next to it.



Select drive

3. You can create advanced settings for your image under Options.



Imaging Options

4. Click on **Create Image**, once you have completed the required settings.
5. Enter the target path of the drive you wish the image to be saved to. You can either accept the suggested path or select another location.
6. The Image is automatically named after the creation date. You can however enter a name manually. All information from the image will be saved, which you can later access through **Image Information** in the Tools list.
7. Select Start. The image file will now be created.



**Note:**

Further settings options, i.e. Imaging Methods, can be found in the Chapter **Imaging Options**.



**Note:**

If a drive is not large enough to store an image you will be prompted to select another. You can also at this stage rename the file, i.e. 2\_Test.omg.



**Note:**

Should all connected drives not be displayed, under **Selection** click on **Refresh Drives**.

## Carry out an Incremental Imaging

An incremental image is recommended when you have already made several images of your drive. When creating an incremental image, only an image of the changes to the base image is made.

In order to carry out an incremental imaging, a base image of the respective drives must have been created beforehand. A base image can either be a "complete" image created using the methods "Image Used Sectors", "Forensic" or "Direct Forensic", or a previously created incremental image. For the last option you should note the following: if in the incremental imaging procedure the option **Data Comparison with Checksums** was selected, then this incremental image can be used as a base. This option is set as default. Should it not have been selected, then you will require next to the incremental image a "complete image" and all previous incremental images too.

1. Please make sure that the drive containing the base image is connected to your computer
2. Click on **Incremental Image** in the start screen of O&O DiskImage
3. A pop-up window will open where you can select your base image. You can find all details of the Image under **Image Information** and the related **Drive Information**
4. Click then on **Create Image**
5. Click the button to the right and the available drives will be displayed. The last image file in the drive is normally displayed automatically. If not, please enter the target path manually or browse through the other drives
6. The Image is automatically named after the creation date. You can however enter a name manually. All information from the image will be saved, which you can later access through **Image Information** in the Tools list
7. Now click on **Open** and then on **Start**. An incremental image will be created from the base image. The Imaging Method of the original "complete" image, e.g. Used Sector Imaging, remains the same and cannot be amended

## Copy a Drive

This function enables you to take a copy of an entire drive with all the saved data, and without having to create image files. The drive is then saved on a selected storage medium as a proper drive without compression.

The “advantage” of a copy as opposed to the creation of an Image is that you cut out the diversion through the image file. You can directly access the copy of the drive without having to restore the drive itself. You do however require much more disk space for a copy as you do for an image.

### Important:

- When copying your Drive (Source Drive) the selected target drive will be overwritten. You should therefore save your copy on an external hard disk, for example, either in a free area or overwrite a previously selected drive purely for this purpose.

1. Select Copy Drive from the start page
2. Select from the list the drive you wish to copy
3. Select a location for the copy from the right-hand column
4. Click on Start Copy and confirm your entries

You can also “reverse” your copy in exactly the same fashion.

### Note:

You can apply further settings for the copy process under **Copying Options**. See also the Chapter **Copying Options**.

## Restore an Image

If you wish to transfer an existing image to your computer, click on **Restore** on the homepage or in the file menu. Advanced settings can be found under **Options**.

You can access all information on your newly created image in **Image Information** and the related **Drive Information**. You can also apply further settings under **Restoration Options**.

**To restore an Image, please follow the instructions below:**

1. Please make sure that the drive containing the image is connected to your computer
2. Under Tasks click on **Select Image**
3. A window appears with the drive and image file. Should the image file presented not match the one required, browse through your drives and enter the path to the image file (\*.omg)
4. Select **Open**
5. Now click on either **Select Target** or **Suggest Target**
6. Select a target drive for the image file. You can either replace an existing volume or create a new volume with a new name



7. Now click on **Restore Image**
8. Click on **Start** in the program window. The image file will now be transferred to the computer



**Important:**

- During restoration, the image overwrites your selected drive with the drive data contained within the image. All data on the target drive is lost and replaced by the image. Please therefore make absolutely certain that you wish to overwrite the target drive.



**Note:**

If you split your image onto various storage media, all such media will be required for a restoration. If you have opted to make an incremental image, all images from the original base image to all subsequent incremental images will be required.



**Note:**

When you wish to restore a system drive, you must use the O&O DiskImage Start CD and start the restoration from there.



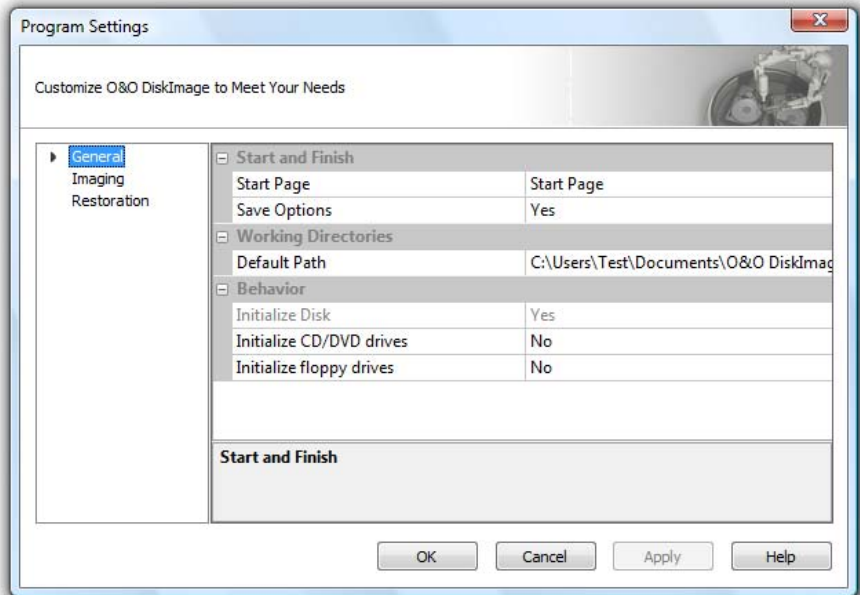
**Note:**

Should the drive containing the image files not be displayed, under **Selection** click on **Refresh Drives**.

# Program Settings

## Options

Under **Settings** in the top right of the menu list, you can customize O&O DiskImage to your own requirements. For example, you can determine whether your created settings should be saved and applied as preferred settings at the next program start-up.



Program Settings

Under **General** you can determine the program page which is displayed when starting O&O DiskImage. For example, you can ensure that the page "Imaging" always appears as the start page.

With **Save Options** the latest settings options for data backup can be saved. If you chose the method "Incremental Imaging" for example, then with the next program start-up, Incremental Imaging will appear as the preferred method.

Under **Image/Default Path** you can create or change the target path for the image storage medium. The Path is stored and then applied as standard to every imaging procedure.

Under **Behavior** you can determine whether drives should be read out (initialized) by O&O DiskImage and if so, which ones. CD/DVD and Floppy Drives are excluded from initialization by default.

**Note:**

If you activate CD/DVD and Floppy Drives for initialization, the time required for the various functions of O&O DiskImage may substantially increase.

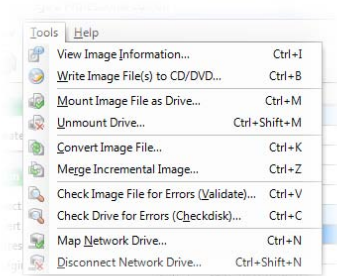
Under Imaging you have the further option of also displaying those drives not visible in the program window, e.g. "Microsoft reserved partitions" under GPT Drives, OEM BIOS Partitions with DELL and IBM or the System Area (1MB) under Windows-Vista.

The option Validate Image File allows you to determine whether an image file should be checked for errors immediately after it is created. This option is also available when restoring an image, whereby the image file is checked for errors prior to being restored.

# Image Operations

## Introduction

This chapter will show you which operations you can perform with a created image. The various image operations can be found in the menu list under Tools.



Tools

## Mount Image file as a Drive

You can have your created image file displayed in Explorer as a regular drive. This allows you e.g. to copy files or directories from the image file onto existing hard disks. It is however not possible to make changes to the image file, such as deleting or adding files.

- Under Tools, click on **Mount Image File** as drive and select an image file from the program window

### Technical Restrictions:

Problem when refreshing under Windows: If you are working over a remote desktop connection, you must restart your computer to display the newly created drive.

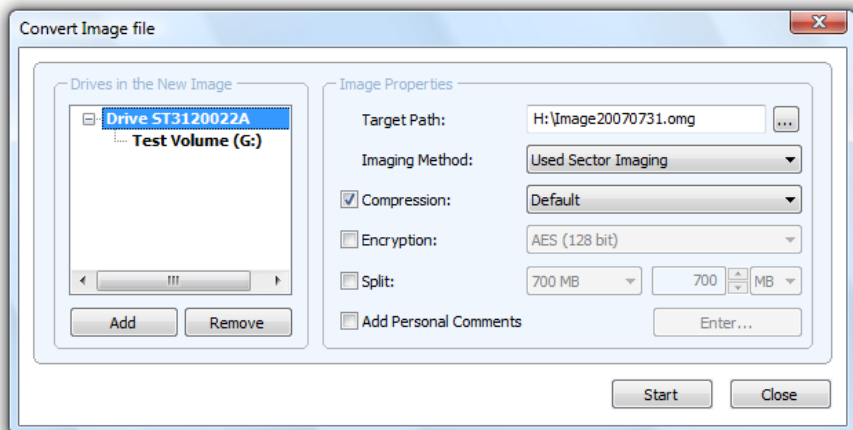
For Forensic purposes only: Initializing an entire hard disk as a virtual drive can lead to problems recognizing the virtual data volume if the imaged hard disk contains one of the following:

- a damaged partition table
- a partitioning process not supported by your operating system (e.g. GPT)
- a RAID System component, where only one physical hard disk was imaged
- a Dynamic drive

## Unmount Drive

If you wish to remove a mounted drive with the image file, click under **Tools** on **Unmount Drive** and remove the drive/image file in the program window.

## Convert Image File



Converting Image File

With the tool **Convert Image File** you can:

- Change the properties of existing images, such as compression and encryption
- Merge images of the same type, including incremental images
- Split images,
- Extract and individually save certain image partitions, see also "Frequently Asked Questions".

Under **Add** you can select and edit images. A copy of the respective image will be made, so that the original image remains unchanged.

## Merge Incremental Image Files

If you have created several incremental images, you can merge these to form a new base image. The newly created base image is now a "full" image. Previous images can then be deleted after the merge has been completed.

1. First make sure all the drives with the base image and incremental images are available to the computer
2. In the menu list under **Tools** click on **Merge Incremental Images**
3. A program window will appear where you can select from and merge the existing incremental image files

**Note:**

Only incremental image files with the same base image may be merged together. By clicking Image Information and the corresponding Drive Information you will be able to view all of details regarding the image.

## Check Image File for Errors

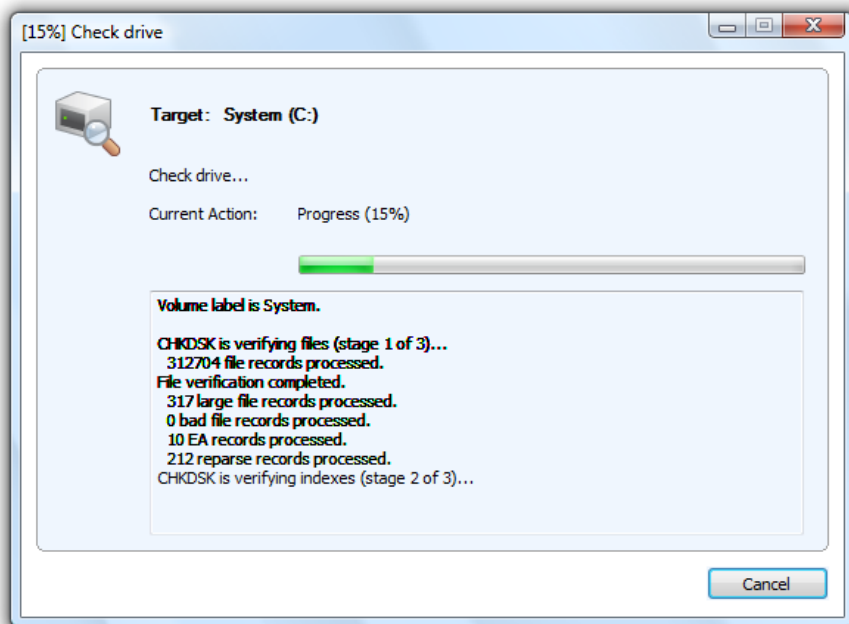
Under **Tools** is a function called **Check Image File for Errors**. This function checks the structural integrity of an image file. It determines whether the logical structure is intact and not damaged. Such damage can be caused by virus attacks or defective hardware.

## Check for Drive Errors

Under **Tools** is the function **CheckDisk** which carries out an intensive analysis of the file system and data storage interface, protecting against any possible loss of data.

CheckDisk is an assistant that leads you step-by-step through the examination of your drives. Simply follow the instructions in the dialogue window and select your drive.

In the next stage the analysis is carried out. While CheckDisk is busy working, you can monitor progress by means of a progress bar, where all the program status messages are listed.




Checking the drive for errors

## Save Images onto CD/DVD

To save your image to CD/DVD, it is necessary to have first created an image, as described in the section entitled **Creating an Image**. The image file(s) must be stored on an internal or external drive. Only then will it be possible to write your image file(s) (\*.omg) to CD/DVD. Images cannot be written directly to CD/DVD without having first saved it to an external or internal drive.

1. Before creating your image, please note the storage capacity of your CD/DVD
2. Under **Imaging Options/Image File/Split** limit the image files to the size of your future storage medium. The image will then be split into multiple image files. The splitting of the image file at a later time is also possible, (**See Converting Image File**). It is recommended, however, that you have the image file split when it is created
3. Then under **Tools** click on **Burn** and follow the instructions in the dialogue window

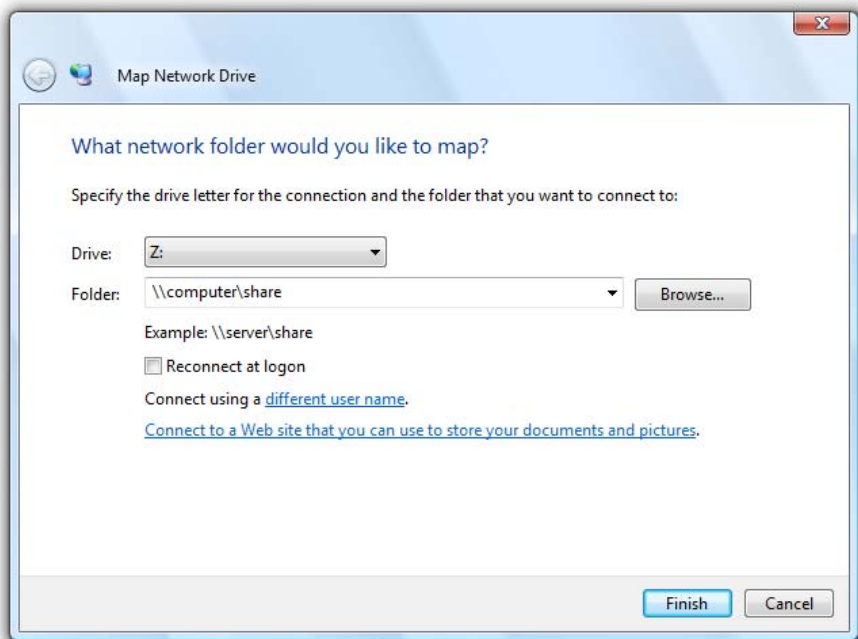
 **Note:**  
Only Image files (\*.omg) or ISOs created using O&O DiskImage can be written onto CD/DVD.

**Note:**

When renaming individual pieces of the image, it is recommended to keep the “number portion” of the filename (the number in parentheses) to avoid confusion with regards to the order of the files and possible problems when restoring the images at a later time

## Map/Disconnect Network Drive

Under Tools in the menu list, you can select the option **Map Network Drive** in order to access drives in a network. This enables you, for example, to restore Images from this location, or to save Images there.



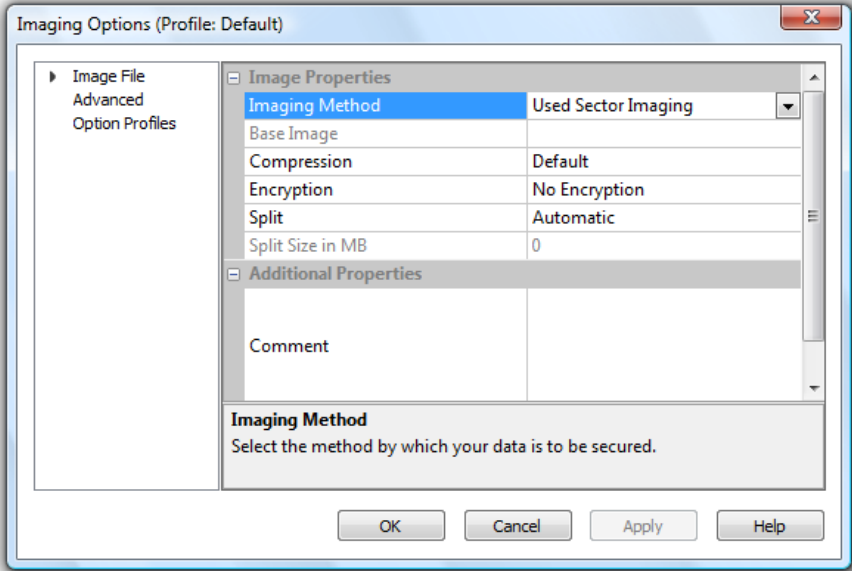
The option **Disconnect Network Drive** enables you to end the connection.



# Image Options

## Introduction

Under the menu heading **Images**, you can implement settings for your image by clicking on **Options**. All image files will then be created by using these settings as standard.



Imaging Options

## Selecting Imaging Methods

Under Options/Image File, you can determine which Imaging Method should be applied as standard to every new image. In most cases, the default option “Image used sectors” is recommended.

### Used Sector Imaging

Using this imaging method will limit the imaging process only to used sectors on a drive. With this option, you can save time, system resources and disk space. This method is the default imaging method.

### Incremental Imaging

The incremental imaging method will create an image that only contains the changes made to a base image or a previous incremental image. If you would like to create an incremental

image, it is necessary to first select at least one image file as your base image. A previously created incremental image can also be used as a base image. Using this method will lead to the creation of a new image file containing the changes that have been made to the base image. More information on this can be found in the section entitled **Getting Started/Creating an Incremental Image**.

### **Forensic Imaging**

The imaging method is especially useful when creating images of non-supported file systems or when, for example, you would like to recover deleted data from a source drive with special data recovery software. Even in the case of laboratory work in which the original hard disk is not to be touched, the forensic imaging function is useful. With this method, an exact sector-level copy of the source drive is made. By saving all sectors on a single partition or drive, all unoccupied and deleted portions of file systems can also be saved. Of course, such a complete image also includes portions of data that have been damaged by software malfunctions.

### **Direct Forensic Imaging**

The direct forensic image method is similar to the forensic imaging method mentioned above. As before, this method creates a complete image of the source drive. The difference, however, is that data are read through low-level system interface. When encryption software is in use on a system, for example, this makes it possible to create an image that includes encrypted and hidden files.

## **Splitting an Image**

An image can be split into multiple image files. If a storage volume lacks the needed space to contain a full image of your selected drives, you will automatically be requested to enter another target location. It is also possible to manually set the maximum size of an image file. If the image being created is larger than entered file size, an additional image file will be created.

This function is especially useful when you plan to write your image to a CD/DVD at a later time. Sometimes a CD/DVD is not large enough to contain the entire image file. For this reason, it is recommended to limit image files to the size of the storage medium, onto which you will be writing your images.

The image file can also be split at a later time using the “convert image file” function. However, it is recommended to split images at image creation to avoid any confusion that may arise

- Under Options/Image File/Split you can determine the size and limit the amount of image files. Image sizes can be set to match the capacity of the storage media.


# Encrypting Data

Encryption based on the AES Algorithm is possible up to 256-Bit. This provides your image with optimal protection against attacks by third parties.

- You can select the encryption grade for your files under **Options/Image File/Encryption**
- You will then be asked to enter a password at the **Create Image** stage

## Set Compression Level

Under **Options/Image File** you can also determine the settings for the **Compression Level**. Here you can choose between No Compression and Default. Default is the rate most recommended.

 **Note:**  
Compression increases the time required to create an image file. However, the file then requires less disk space on the storage medium.

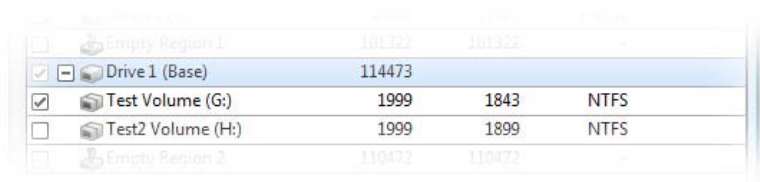
## Post Comments to Image Files

Under **Options/Image File/Additional Properties** you have the option of adding comments to your image files, i.e. "Drive C: no program".

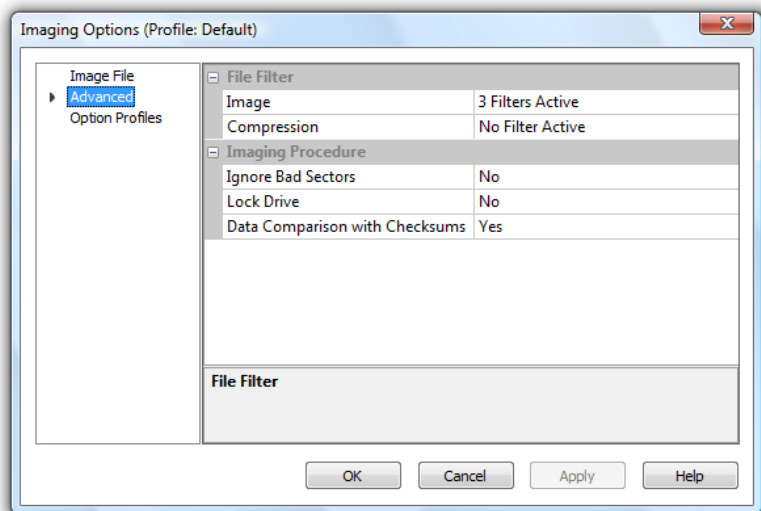
## Exclude Data from an Image

When using the imaging method **Used Sector Imaging** you have the option of excluding data from the image or compression. Please follow these instructions for excluding data:

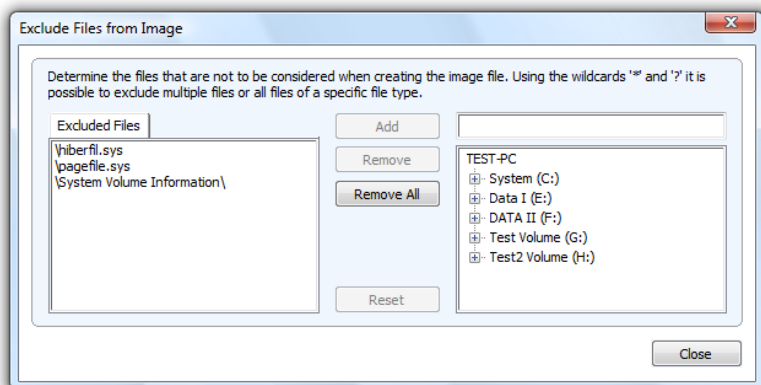
1. Mark the drive you wish to image



2. Please make sure that the image method **Used Sector Imaging** has been selected.
3. In the window **Image Options** click on **Advanced**. By default, 3 filters are active.




4. Under **File Filter** click on **Image**.
5. Click the button on the right next to the active filter to select files and directories. A new program window appears.



#### Exclude files from Image

6. Select from the right hand side of the program window the files and directories you wish to exclude from the image. Only data on the drive selected by you for imaging can be excluded.
7. By using **Add** you will exclude the checked data from the image.

8. Once you have completed your exclusions you can **close** the window. The changes you made will now be incorporated

 **Note:**  
Depending on the amount of data on the hard disk, the exclusion of files may take a few minutes.

## Exclude Data from Compression

Data that are already compressed, e.g. \*.rar or \*.zip files, can not be further compressed during the imaging process and, for this reason, may be excluded from the compression process. This accelerates the procedure. To exclude data from compression, please follow the procedure laid down in **excluding data from an image**. Data already compressed (i.e. Zip, Rar files) is excluded from compression by default.

## Data Comparison with Checksums

Unaltered data from incremental images is saved with the other data as standard using checksums. The files are fractionally larger. It is sufficient when, at the next incremental imaging, you use a previous incremental image (with checksums) as the base image. This function is activated by default. If you save all images to a single directory, you might consider deactivating this function. Your images will then take up less space on the disk.

- The setting, **Data Comparison with Checksums**, can be activated under **Imaging Options/ Advanced**

## Create a consistent Image

You can lock the drive you wish to create an image of, for the duration of the copy procedure. This prevents changes being made to the drive while the image is being created. The drive will no longer be displayed in Explorer and all applications will be closed. The drive is not locked by default.

- To block a drive, activate the function **Lock Drive** under **Image Options/Advanced**.

 **Note:**  
It is not possible to block the system partition.

If you leave the drive unblocked as you wish to continue working during the procedure, changes will be “cached”, or intermediately saved. This working memory buffer is however restricted. You can see from the Cache Status Display how much intermediate memory is available.



**Warning:**



Should you go over the free intermediate memory, current changes will be saved direct to the source drive. This makes the copy inconsistent and may render it unusable.



**Note:**

To maintain the maximum possible intermediate memory, please close all applications before starting the copy procedure, for example defragmentation

## Ignoring Bad Sectors

If an error occurred while reading a storage volume, it is possible to set under **Imaging Options/Advanced**, whether the read process should be aborted (**No**) or the bad sector be overwritten with a zero in the image file (**Yes**).

## Creating an Image Profile

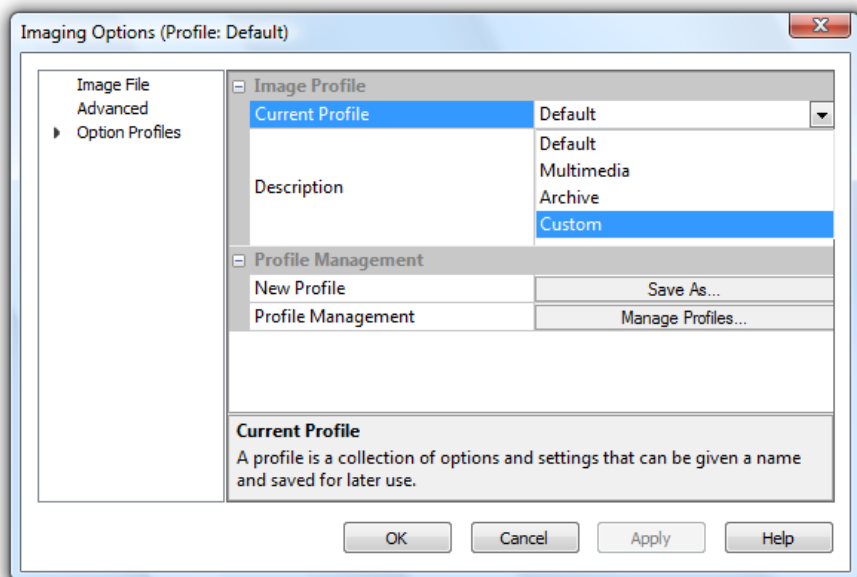
Under **Imaging Options/Option Profiles** you can reset the imaging settings to the **Default Settings** or select an existing profile.

Under **Current Profile** you can select from preset Multimedia or Archive profiles. The **Multimedia profile** excludes already compressed music and video data (i.e. \*.avi, \*.mp3, \*.mpeg) from imaging. The **Archive Profile**, on the other hand, excludes other compressed data such as \*.zip or \*.rar.

If you would like to save your user-defined settings, please follow these instructions:

1. Activate your settings under imaging options
2. Select **Option Profiles/ New Profile**
3. Give your newly created profile a name

Under **Profile Management** it is possible to make changes to current profiles or delete those that are not longer needed.

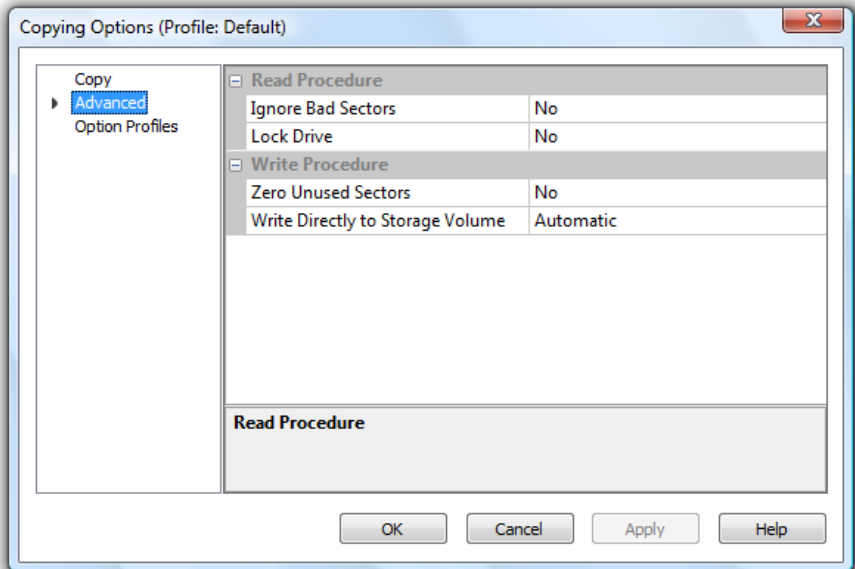


Imaging Options

# Settings for copying Drives

## General Copying Options

Under **Copy Drive** and **Copying Options**, you can apply settings for the copy process.



Settings for the copy process

## Set a Copy Method

As with creating an Image, you can also individually set a copy method for the copying process. The copy methods are constructed in a similar way to the Image methods.

You can choose between "Used Sector", "Forensic" or "Direct Forensic". You can read more about this topic under Imaging Options/Imaging Methods.

## Create a consistent copy of a drive

You can block the drive you wish to copy for the duration of the copy procedure. This prevents changes being made to the drive while it is being copied. The drive will no longer be displayed in Explorer and all applications will be closed. The drive is not blocked by default.



- To block a drive, activate the function **Lock Drive** under **Copy Options/Advanced**.

**Note:**

It is not possible to lock the system partition.

If you leave the drive unblocked as you wish to continue working during the procedure, changes will be “cached”, or intermediately saved. This working memory buffer is however restricted. You can see from the Cache Status Display how much intermediate memory is available.

**Warning:**

- Should you go over the free intermediate memory, current changes will be saved direct to the source drive. This makes the copy inconsistent and may render it unusable.

**Note:**

To maintain the maximum possible intermediate memory, please close all applications before starting the copy procedure, for example defragmentation.

## Write over Unused Sectors

Under Copying Options, you can select **Zero Unused Sectors**, should you wish to overwrite unused sectors with zeros.

## Write Directly to Storage Volume

With the option **Write Directly to Storage Volume** under Copying Options, you can determine whether a restoration should be written directly to the storage volume, by way of the file system driver (e.g. restoring a Direct Forensic Image).

## Ignore Bad Sectors

Should an error occur during the reading of a storage medium, under **Imaging Options/Advanced** you can determine whether the read process should be stopped (No) or if the error should be included in the Image with a Zero (Yes).

## Set a Copy Profile

Under **Copying Options/Option Profiles** you can either reset the image settings to **Default** or select a previously set Profile.

Under **Current Profile**, you can choose between Default and Custom. Should you wish to save your custom settings when copying, please follow the instructions below:

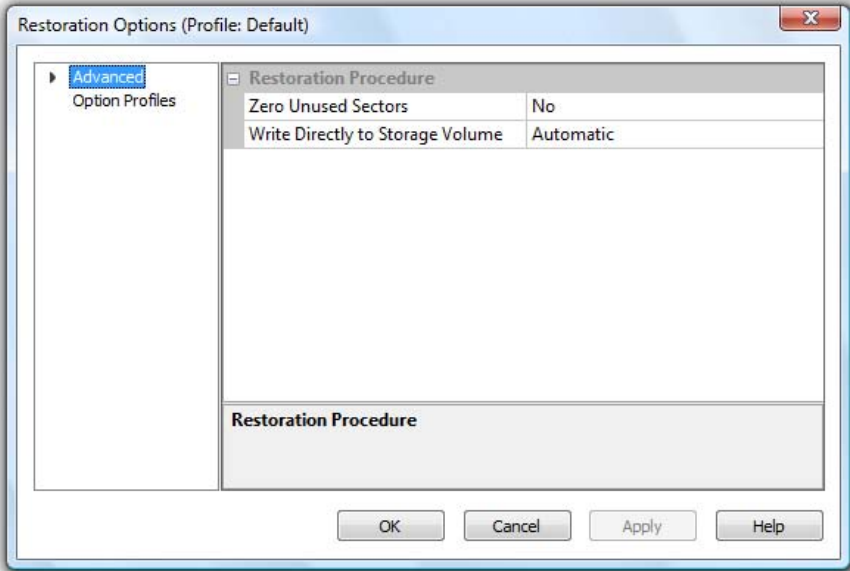
- Create your Settings under **Copying Options**
- Select **Option Profiles/New Profile**
- Give your new Profile a name in the pop-up window

Using **Profile Management** you can change or delete existing Profiles.

# Restoration Options

## Introduction

Under the menu header **Restore**, by clicking on **Options** you can create restore settings.



Restoration Options

## Overwrite unused Sectors

With **Zero Unused Sectors** you can determine whether unused sectors are written over explicitly with 0.

## Write directly to Storage Volume

You can decide whether the restoration should be carried out direct onto the data storage medium (i.e. direct forensic restoration). It is recommended to keep the the setting on “automatic”.

## Options Profile

**Current Profile:** A profile is a combination of options merged under one name which can then be selected when required.

# Frequently Asked Questions

## **When and how often should I make Images?**

- You should image an intact system
- We recommend regular imaging (once a month minimum). The more regular you carry this out, the more up-to-date the data is contained within those images

## **Which drives should I Image?**

- System drive (Windows), mostly Drive C:
- All remaining data drives where private and business data, e.g. customer data, photo collections or music is stored

## **Where should I store my Image?**

- Not on the same hard disk where the imaged drive is located
- Ideally on an external hard disk
- DVD

## **I just bought myself a new computer. If I take a complete Image of my old computer, can I restore it to my new one?**

- Restoring data drives is not a problem
- We do not recommend a complete restoration (inclusive operating system) onto another computer with different hardware, as this can lead to a system crash

## **Do I have unlimited use of all functions with the trial version?**

- The trial version is fully functional and has no restrictions
- You should however note that restoring a system partition is only possible with the bootable O&O DiskImage CD, included when you purchase the product

## **When do I need the bootable CD from O&O DiskImage?**

- For restoring the system partition
- When your operating system will no longer start

## How do I save an Image to CD/DVD?

- You must create an image file(s) and save it to your hard disk before you can write it to CD/DVD
- When creating the image, you should restrict the image file size to the size of the intended removable medium where it will be saved, under **Image Options/Image Properties/Split**
- Should the image exceed the chosen maximum file size, it will be split into several image files
- You can then write the image files to CD/DVD
- Simply click on Tools on the start page, then on Write Image File(s) to CD/DVD and follow the instructions

## What do I do when my Image is too big for a CD/DVD?

- If you already have an Image saved to your hard disk that is too big for the removable storage medium, then you can of course still split the image file
- Under Tools, open up Convert Image File
- Select the Image you wish to change by using Add
- Then select Split and enter the required maximum file size of the individual parts
- During conversion, one copy of the Image is made, whilst the original remains unchanged

## I have split the Image and saved it to various storage media (CD/DVD). I want to:

- restore this Image
- display drives from the Image
- use the Image as a Base Image for Incremental Imaging purposes
- merge Incremental Images
- convert the Image file

Before you go ahead with any of the above named steps, we strongly advise you to save all parts of the Image in a folder on your hard disk. Please ensure the folder is not on the drive to where you wish to restore the Image. Once you have done this you can complete the steps outlined above by simply following the instructions under the respective chapters in the User's Guide.

## Can I carry on working during the imaging procedure?

O&O DiskImage does not block drives by default during imaging. You can therefore continue working and make changes. The working memory buffer is however restricted. You can see how much is available in the Cache Status Display. See Chapter "Creating Consistent Images".

**Note:**

To maintain the maximum available working memory buffer, please close all applications before and during the procedure, for example defragmentation or copy processes.

**Important:**

- Should you go over the available working memory, the current changes will be written direct to the source drive. This makes the image inconsistent and may render it unusable. In such cases you should load the image after the procedure is finished and check it for errors.

## Can I still change the image retrospectively?

Under **Tools** you can find the function **Convert Image File**. This enables you to change certain properties and content of the image retrospectively – see Chapter “Convert Image File”.

### I have created an image of several drives but want to create a separate image of just one of those drives.

1. Under **Tools** select **Convert Image File**.
2. Select the image using **Add** and then select the drive you wish to separately image.
3. After confirming, click **Start**.

A new image will now be created. The old image remains unaltered.

# O&O Support and Contact

## Technical Support

To receive more information about O&O DiskImage, please visit our website, [www.oo-software.com](http://www.oo-software.com), and get the latest information about product developments and support. Also included on our website are regularly updated FAQs and Knowledge Bases that offer the most common problems and questions regarding our products.

All registered customers receive installation and product support free of charge for the first 90 days after registration. When contacting our support department, please do not forget to have your registration code ready.

In addition, it may be helpful to read our frequently asked questions (FAQ) section of our website before you contact our support department. It is always possible that your specific question or problem may have already been addressed.

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## IMPORTANT NOTE

The Microsoft® Windows® Preinstallation Environment software included with this device or software may be used for boot, diagnostic, setup, restoration, installation, configuration, test or disaster recovery purposes only.



### NOTE:

THIS SOFTWARE CONTAINS A SECURITY FEATURE THAT WILL CAUSE END USER'S SYSTEM TO REBOOT WITHOUT PRIOR NOTIFICATION TO THE END USER AFTER 72 HOURS OF CONTINUOUS USE.

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The subject of this contract is the computer program, the description thereof and the user manual as well as any other accompanying written material. This will henceforth also be referred to as "software".

O&O wishes to point out that, at the current state of technology, it is not possible to create software that works perfectly in all applications and combinations. The subject of this contract is therefore a software program that is fit for the purposes detailed in the description and the user manual.

O&O DiskImage Professional Edition: The software requires Windows 2000 Professional, Windows XP (all Editions) or Windows Vista (all Editions) operating systems. The use of the software per the contract cannot be guaranteed without one of the aforementioned systems.



O&O DiskImage Server Edition: The software requires Windows 2000 (all Editions), Windows Server 2003 (all Editions), Windows XP (all Editions) or Windows Vista (all Editions) operating systems. The use of the software per the contract cannot be guaranteed without one of the aforementioned systems.

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Damages for data loss will be restricted to the typical recovery costs incurred in an environment where regular and appropriate backup copies have been created.

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If you have any questions regarding the licensing of O&O software or you wish to contact O&O, please get in touch with us as follows:

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